

I CLAIM:

1. A method of treating a wound, comprising the step of positioning an ultrasound transducer having a distal radiation surface to direct an ultrasound standing wave at a surface of a wound, wherein the distance  $d$  between distal radiation surface and the wound surface is determined by the formula

$$d = n \times \lambda / 2$$

wherein  $\lambda$  is the wavelength of the ultrasound standing wave and  $n$  is a positive integer.

2. The method of Claim 1, wherein the ultrasound transducer operates at a frequency of from about 10kHz to 10<sup>3</sup> MHz.

3. The method of Claim 1, wherein  $d$  is at least 0.1 in.

4. The method of Claim 1, wherein the ultrasound transducer is frequently moved back and forth in a longitudinal direction by an operator to reach a preferred distance to create a standing wave.

5. The method of Claim 1, wherein the ultrasound standing wave creates radiation and/or pressure that energizes the wound.

6. The method of Claim 1, wherein in a prior step a gel, drug, or other medicant is applied to the wound surface.

7. The method of Claim 6, wherein any medical effect of the gel, drug, or other medicant is energized by the ultrasound standing wave.

8. The method of Claim 1, wherein the ultrasound standing wave has an ultrasound radiation, pressure, massage, and/or sterilization effect.

9. A system for treating a wound with ultrasound standing waves, comprising  
a generator for generating ultrasound waves,  
an ultrasound transducer operatively connected to said generator and  
having a distal radiation surface, and

means for adjusting the distance between the distal radiation surface and a surface of a wound to create ultrasound standing waves.

10. The system of Claim 9, wherein the ultrasound transducer operates at a frequency of from about 10KHz to  $10^3$  MHz.

11. The system of claim 9, wherein the distal end of the ultrasound transducer comprises a bushing.

12. The system of Claim 9, wherein the ultrasound frequency is modulated.

13. The system of claim 9, wherein the ultrasound frequency is pulsed.

14. The system of Claim 9 wherein the waveform of the ultrasound wave is sinusoidal.

15. The system of Claim 9, wherein the wave form of the ultrasound wave is rectangular.

16. The system of Claim 9, wherein the wave form of the ultrasound wave is trapezoidal.

17. The system of Claim 9, wherein the waveform of the ultrasound wave is triangular.

18. The system of Claim 9, wherein the ultrasound beam is focussed.